

Claims

[c1] WHAT IS CLAIMED IS:

1. A sealing ring comprising:

a support member;

a sealing lip connected to the support member and configured to rest against a machine part to be sealed;

the sealing lip having a passage for the machine part, wherein the passage points to an air side of the machine part to be sealed and has a contact side provided with a return conveying device for a medium to be sealed at a medium side of the machine part;

wherein the return conveying device is configured as an alternating twist structure.

[c2] 2. The sealing ring according to claim 1, wherein the alternating twist structure is formed by at least one elliptical structure.

[c3] 3. The sealing ring according to claim 2, wherein several of the at least one elliptical structure are arranged so as to cross one another.

[c4] 4. The sealing ring according to claim 2, wherein the at least one elliptical structure surrounds the passage of

the sealing lip.

- [c5] 5. The sealing ring according to claim 3, wherein the elliptical structures are angularly staggered relative to one another about a circumference of the sealing lip.
- [c6] 6. The sealing ring according to claim 5, wherein major axes of neighboring ones of the elliptical structures are positioned at an acute angle relative to one another.
- [c7] 7. The sealing ring according to claim 2, wherein the elliptical structures surround at a spacing a sealing edge of the sealing lip.
- [c8] 8. The sealing ring according to claim 1, wherein the alternating twist structure is a sine structure extending at a spacing about a sealing edge of the sealing lip.
- [c9] 9. The sealing ring according to claim 8, wherein the sine structure extends peripherally about the sealing edge.
- [c10] 10. The sealing ring according to claim 1, wherein the alternating twist structure is formed by arc-shaped and wedge-shaped structures opening in a direction toward the medium side.
- [c11] 11. The sealing ring according to claim 10, wherein the arc-shaped and wedge-shaped structures are uniformly

distributed about a periphery of a sealing edge of the sealing lip.

- [c12] 12. The sealing ring according to claim 10, wherein the vertex of the arc-shaped and wedge-shaped structures contacts a closed ring surrounding the passage of the sealing lip.
- [c13] 13. The sealing ring according to claim 10, wherein the arc-shaped and wedge-shaped structures have sections diverging in a direction toward the medium side.
- [c14] 14. The sealing ring according to claim 13, wherein the sections are straight.
- [c15] 15. The sealing ring according to claim 10, wherein the vertex of the arc-shaped and wedge-shaped structures are spaced from the sealing edge.
- [c16] 16. The sealing ring according to claim 1, wherein the alternating twist structure is formed by straight structures crossing one another.
- [c17] 17. The sealing ring according to claim 16, wherein the straight structures are positioned at an obtuse angle to one another.
- [c18] 18. The sealing ring according to claim 16, wherein the straight structures extend up to a sealing edge of the

sealing lip.

- [c19] 19. The sealing ring according to claim 18, wherein the straight structures intersect one another in the area of the sealing edge.
- [c20] 20. The sealing ring according to claim 1, comprising a sealing disk that is comprised of polyfluorocarbon, wherein the sealing lip is part of the sealing disk.
- [c21] 21. The sealing ring according to claim 20, wherein the polyfluorocarbon is polytetrafluoroethylene.
- [c22] 22. The sealing ring according to claim 1, comprising a sealing disk that is comprised of an elastomer, wherein the sealing lip is part of the sealing disk.
- [c23] 23. The sealing ring according to claim 1, comprising a sealing disk that is comprised of elastomer-modified polytetrafluoroethylene, wherein the sealing lip is part of the sealing disk.
- [c24] 24. The sealing ring according to claim 1, wherein the alternating twist structure is formed by recesses in the sealing lip.
- [c25] 25. The sealing ring according to claim 1, wherein the alternating twist structure is formed by projections of the sealing lip.

